

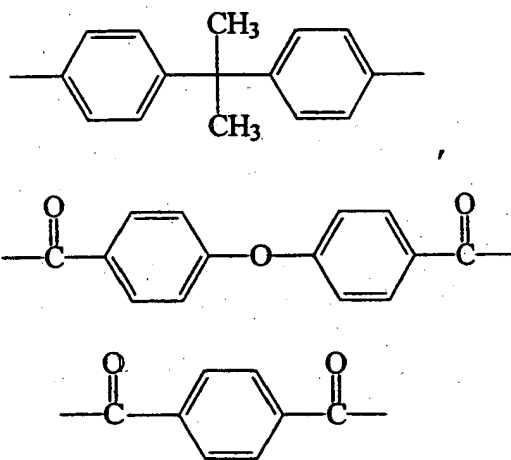
We claim:

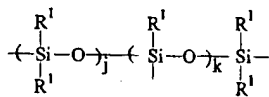
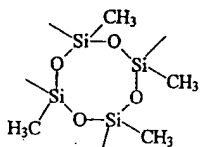
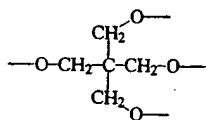
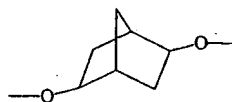
1. A dental material comprising at least one cationically polymerizable monomer as a binder, a polymerization initiator, and based on the dental material, 1-95 wt% of at least one inorganic filler, said binder containing at least one monomer of formula (I):



wherein R represents hydrogen, a methyl or ethyl group; X and Y independently represent an unsubstituted or substituted aliphatic, cycloaliphatic, or aromatic residue with 1-100 carbon atoms, wherein one or more CH₂ groups can be replaced by O, C=O, -CO₂, -SiR¹₂-, and/or -SiR¹₂O-, wherein R¹ independently represents an alkyl or alkoxy or aryl residue with 1-10 C atoms; n represents a whole number of 1-3; and m represents a whole number of 2-5.

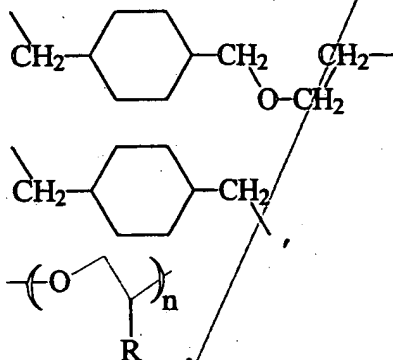
2. The dental material according to Claim 1, wherein the residue X is one or more of the following groups:





wherein R^1 independently represents an alkyl or alkoxy residue with 1-6 C atoms; j and k independently represent whole numbers in the range of 1-10.

3. The dental material according to Claim 1, wherein the residue Y has one or more groups:



SUB
W

wherein R represents hydrogen or methyl; and n represents a whole number in the range of 1-10.

4. The dental material according to Claim 2, wherein the residue Y has one or more groups:



5. The dental material according to claim 1, wherein the monomers of formula (I) have a molecular weight in the range of 300-3000.

6. The dental material according to claim 1, wherein the binder has a viscosity in the range of 1 mPa·s to 1000 mPa·s.

7. The dental material according to claim 1, wherein the binder also has monofunctional vinyl ethers.

8. The dental material according to claim 1, wherein the polymerization initiator contains an iodonium salt and a sensitizer.

9. The dental material according to claim 1, wherein the polymerization initiator can be initiated by irradiation with visible light.



10. The dental material according to claim 1, wherein the filler is a member selected quartz, ground glass, silica gel, from the group consisting of silica, a zeolite, an ormocer, and mixtures of these substances.

5 11. The dental material according to Claim 10, wherein the filler is treated with an adhesive.

12. The dental material according to claim 1, wherein the filler content is in the range of 50-90 wt% based on the total weight.

10

13. The dental material according to claim 1, wherein the filler content is in the range of 65-90 wt% based on the total weight.

14. The dental material according to claim 1 wherein the flexural strength thereof is ≥ 30 N/mm² in accordance with DIN 53 452, and/or the modulus of elasticity thereof is ≥ 500 N/mm² in accordance with DIN 53 457.

15

15. The dental material according claim 1, consisting of the following:

4.98-95 wt% Binder;

0.02-10 wt% Polymerization initiator;

1-95 wt% Filler; and

0-20 wt% Usual additives, based on the total weight of the dental material.

20

16. A method for the production of a dental material according to Claim 1, comprising mixing components together.

25

Add
a³